ALTERNATIVE D - THROUGH DELTA CONVEYANCE

Reduce Conflicts in the System

A solution will reduce major conflicts among beneficial users of water. A solution should:

- significantly reduce each of the four major conflicts which have been identified for the Bay-Delta system. Most of the problems in the Bay-Delta are embodied in one or more of these conflicts. They are:

  - fisheries and diversions - **medium, export pumping from the South Delta continues and only a moderate level of habitat restoration is included. Full screens help on through Delta.**

  - habitat and land use/flood protection - **medium, only moderate levels of vulnerability reduction and habitat restoration are included.**

  - water supply availability and beneficial uses - **medium/high, water supply benefits associated with downstream storage and improved trans-Delta conveyance.**

  - water quality and land use - **medium, some improvement in export water quality due to improved circulation from the Sacramento River to the export pumps.**

MEDIUM

Equitable

An equitable solution will focus on solving problems in all problem areas. Improvement for some problems will not be made without corresponding improvements for other problems. Equitable considerations include:

- satisfy some portion of each of the 4 primary and 14 secondary objectives which have been identified for the program - **High, addresses some portion of all objectives.**

- provide a reasonable balance of reliability weighted improvements for the four resource areas. Balance does not necessarily require an equal level of improvement for each resource areas (e.g. water exporters might be willing to accept less improvement in water supply reliability if water quality is improved). - **Medium, uncertainty that fish**

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populations will improve, therefore water supply and ecosystem improvements are somewhat uncertain and unreliable. Water supply reliability and drinking water quality would be increased as a result of the increase conveyance and pumping capacity and south of Delta storage. This allows increased flexibility to meet the pumping needs of a reduced pumping window.

- result in costs allocated to the economic users of water based on the benefits they receive from the solution. However, there is no obligation to provide benefits to those unwilling to contribute towards the solution - **Unable to consider this factor in the absence of a financing plan.**

- result in net benefits and burdens balanced across stakeholder groups - **Medium, all areas share in the burdens, however the benefits may not be as proportional. Little flexibility to rebalance.**

MEDIUM

Affordable

An affordable solution will be one that can be implemented and maintained within the foreseeable resources of the Program and stakeholders. An affordable solution should:

- have identifiable revenue and financing provisions which are adequate for implementation and continued maintenance of the solution - **Unable to consider this factor in the absence of a financing plan.**

- be among the least expensive solutions, for a given level of implementation, which achieve the Program objectives - **Medium, the improved through-Delta conveyance improves the cost effectiveness of the new downstream storage component, however with continued export pumping from the South Delta, the benefits may still be limited.**

- minimize the negative effects on the credit rating of those funding the solution - **Unable to consider this factor in the absence of a financing plan.**

MEDIUM

Durable

A durable solution will have political and economic staying power and will sustain the resources

it was designed to protect and enhance. A durable solution should:

- be adaptive, flexible to changing needs and potential future conditions, and able to address biological uncertainty to sustain the resources it was designed to protect and enhance -**Low/Medium, The new South of Delta storage provides flexibility through potential reoperation to adapt to changed circumstances. However, continued export pumping from the South Delta limits the ability of this alternative to adapt to changes.**

- provide ecosystem improvement using a variety of mechanisms to better face biological uncertainty rather than relying on any single theory of ecosystem improvement - **Low/Medium, this alternative relies on a combination of habitat improvement (moderate), increased flow from the Sacramento river into the Central Delta, and reoperation (export diversion timing). The mechanism to face biological uncertainty is narrowly focused.**

- accommodate hydrological and other physical uncertainties (e.g. increased storage would hedge against the unknown, or consideration of impacts of potentially higher sea levels on the various alternatives could strengthen durability) - **Low/Medium, new storage improves durability in this sense, but continued export diversions from the South Delta are a negative. The continued South Delta export diversions remain suspect to interruption due to higher sea levels (increased flood risk) and additional species listings. The opportunity for prolonged drought management is limited.**

- have adequate legal, operational, or physical provisions to ensure that objectives continue to be met in an equitable way for the long term - **Medium, although the basic conveyance configuration of the Delta remains, and some existing hydraulic constraints on export diversions remain, the increased permitted capacity of the export pumps requires assurances regarding their proper operation.**

- include a financial plan which has provisions to ensure that the solution will be implemented as intended, while providing flexibility to alter revenues to respond to changing needs - **Medium/High, because water diverted to the new storage is readily quantifiable and accountable. Long-term contracts for water supply can be developed based on deliveries from storage and use of storage. Implementation of the channel improvements can be phased in over time in an adaptive manner, and expanded or contracted as more becomes known.**

MEDIUM

Implementable

An implementable solution will have broad public acceptance, legal feasibility and will be timely and relatively simple to implement compared to other alternatives. An implementable solution should:

- have legal or practical precedents or have a clearly identified series of reasonable steps which could be taken to enable implementation - **Medium, relative to the other alternatives, development of new storage and habitat restoration projects is reasonably straightforward, requiring Section 404, NEPA, and CEQA compliance. The mitigation for the reservoir sites and the increased opposition to new storage reduces the practical precedents of new storage.**

- have institutional feasibility - **High, this alternative could be implemented by and within existing institutional authorities. Some contractual or joint powers authorities might be desirable to implement the new storage.**

- include as few major legal and institutional changes as necessary while meeting Program objectives - **High, this alternative could be implemented by and within existing institutional authorities. Some contractual or joint powers authorities might be desirable to implement the new storage.**

- have broad acceptance across the various geographic areas and interest groups as well as the state as a whole - **Medium, discounted because of concerns regarding the efficacy of the new screened diversion on the Sacramento River, and limited water supply and water quality improvements perceived available from this alternative.**

MEDIUM/HIGH

No Significant Redirected Impacts

A solution will not solve problems in the Bay-Delta system by redirecting significant negative impacts, when viewed in its entirety, in the Bay-Delta or other regions of California. A solution should:

- minimize negative long-term economic impacts at the regional level - **Medium, relatively small amounts of land-use change compared to other alternatives. However, contains 400 TAC of land retirement which may have long term economic**

impacts.

- compensate for or mitigate unavoidable negative impacts to the greatest extent practicable - **Medium, 400 TAC would create some redirected impacts.**

MEDIUM

POTENTIAL REVISIONS

Revision	Principle Improved	Rationale	Potential Adverse Affects
Rehabilitate fish facilities at export pumping plants	Reduce Conflicts	Reduces entrainment effects	Cost
Add north of Delta storage	Reduce Conflicts	Provides greater flexibility to reduce conflicts of screening facility on the Sacramento River, and improves water supply benefits.	Cost, Site specific impacts, redirected impacts
Increase emergency response on levee vulnerability	Reduce Conflicts, Equitable, Implementable, Durable	Reduce land use conflicts, increases protection of water supply quality, improves breadth of support of a single focused Delta conveyance system.	Cost
Add upper Sacramento River meander belts	Reduce Conflicts, Durable	Upstream meanders increases river aquatic and terrestrial habitat.	Cost, Looks like add-on, Re-directed impacts to land owners.

Revision	Principle Improved	Rationale	Potential Adverse Affects
Add subsidence control program	Reduce Conflicts, Durable, Implementable, NSRDI	Long term subsidence program that can co-exist with Ag and ecosystem. Long term conversion.	Cost, Re-directed impacts on long term change in land use. Perception that program is eliminating Ag in Delta.